

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 00-045

CONDITIONAL WAIVER OF WASTE DISCHARGE REQUIREMENTS FOR TIRE
SHREDS REUSE IN ROAD CONSTRUCTION PROJECTS

CALIFORNIA DEPARTMENT OF TRANSPORTATION

The California Regional Water Quality Control Board, San Francisco Bay Region, hereinafter called the Board, finds that:

1. **Purpose of Order:** This Order conditionally waives Waste Discharge Requirements for use of tire shreds in road construction projects. This waiver is based upon studies which indicate that water quality impacts from use of tire shreds in road construction projects are negligible, and the environmental benefit of reducing waste tire piles.
2. **Project Description:** California Department of Transportation (CalTrans, hereinafter referred to as the discharger) proposes to utilize tire shreds in road construction projects. The method of recycling proposed by Caltrans is to shred used tires into small pieces which would be utilized as road base and fill material. Typical construction would entail placement of tire shreds in layers over native soil, and beneath engineered soil. The tire shreds would be separated from the underlying and overlying soils by geofabric. The compacted tire shreds layer and overlying soil layer may also be capped by asphalt or concrete. Surface grading, an asphalt or concrete cap, or drainage structures would prevent infiltration of rainwater through the tire shreds.
3. **Water Quality Studies:** Water quality studies have been conducted which indicate that the use of tire shreds as a road construction material will not significantly affect the quality of the waters of the State. Quantification of metals, VOCs, and SVOCs in water exposed to tire rubber and tire belts indicate that measurable impacts to water quality are negligible. Under laboratory conditions fish and other aquatic species were in most cases impacted by water immersed with tire shreds. Actual field conditions and criteria for tire shreds placement will prevent biota from such exposure.
4. **Prevention of Water Quality Impacts:** Specific design criteria for tire shred placement are necessary to assure that beneficial use of waters of the state are not impacted by potential leaching of contaminants from tire shreds. Design criteria include maintaining minimum tire shred size requirements, eliminating the passage of groundwater and

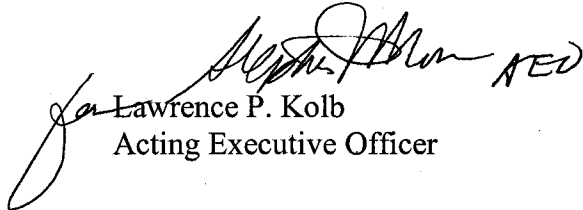
surface water through tire shreds, minimizing percolation of rainwater water through tire shreds, and minimizing the potential for tire shreds to self-ignite.

5. **Report of Waste Discharge:** Section 13260(a) of the California Water Code requires that any person discharging waste or proposing to discharge waste within any region, other than to a community sewer system, that could affect the quality of the waters of the state, shall file a report of waste discharge (ROWD). Caltrans' submittal of January 27, 2000 and supporting documentation fulfills this requirement.
6. **Waiver of Waste Discharge Requirements:** Title 27, Division 2, Subdivision 1 of the California Code of Regulations authorizes the Regional Water Quality Control Board (RWQCB) to adopt Waste Discharge Requirements (WDRs) to address discharges of solid waste which may potentially impact waters of the State. Section 13269 of the Water Code authorizes the RWQCB to waive WDRs for a specific discharge or for a specific type of discharge where such a waiver is not against the public interest. Such a waiver is conditional: it may be terminated for any type of discharge at any time; does not authorize any discharge that is otherwise prohibited or regulated; does not preclude the need for permits which may be required by other local or governmental agencies; and does not preclude the RWQCB from taking enforcement actions for violations of the terms and conditions set forth in this waiver or for any discharges that cause or threaten to cause violations of provisions of the Basin Plan or that create or threaten to create a condition of pollution or nuisance.
7. **Public Interest for Waiver:** It is not against the public interest for the RWQCB to waive the issuance of WDRs for discharges of tire shreds, provided that the dischargers meet and comply with all conditions and requirements of this waiver.
8. **California Environmental Quality Act:** In accordance with the California Environmental Quality Control Act (CEQA) requirements, the California Integrated Waste Management Board (IWMB), on behalf of Caltrans, prepared a Negative Declaration for use of tire shreds at the Interstate 880/Dixon Landing Road interchange project. The negative declaration was adopted at its April 18, 2000 Board meeting. The Negative Declaration is consistent with the terms and conditions of the waiver of WDRs contained herein. Other individual placements may have site-specific or local impacts on the environment that cannot be anticipated at this time; such impacts may require supplemental environmental assessment under CEQA by state or local governmental agencies.

9. **Conditions of Waiver:** WDRs for the discharge of tire shreds to land for use on road construction projects are hereby waived provided that the following conditions are met:
- a. Tire shreds shall have a maximum of 25% (by weight) passing 1 ½ inch sieve, and maximum of 1% passing No.4 (4.75 mm) sieve. To the extent practicable, particulate tire rubber and particulate belt materials shall be removed from material stock prior to placement.
 - b. Belt material protruding from the tire shreds shall protrude no more than 1-inch from the cut edge of the tire shreds on 75% of the pieces and no more than 2- inches on 100% of the pieces.
 - c. Tire shreds shall have less than 1% by (by weight) of metal fragments that are not at least partially encased in rubber.
 - d. Tire shreds shall be free of contaminants such as oil, grease, gasoline, diesel fuel, wood, wood chips or other fibrous organic matter or materials that could create a fire hazard.
 - e. The tire shreds shall be free of remains of tires that have been subjected to a fire.
 - f. The tire shreds shall not be placed in direct contact with soil containing organic matter such as topsoil, which could biochemically create a fire hazard.
 - g. Use of drainage features that could provide free access to air shall be avoided.
 - h. Tire shreds shall not be placed in a single layer greater than 10 feet thick. However, the cumulative thickness of tire shred layers may be greater than 10 feet thick provided that layers of non-organic material separate tire shred layers.
 - i. Tire shreds shall not be placed in contact with groundwater and must be separated from the highest anticipated groundwater level by 5 feet.
 - j. Tire shreds shall be contained beneath a cap constructed of asphalt, concrete, or compacted earth. Infiltration of water into the tire shreds shall be minimized by grading the cap surface to promote runoff. The integrity of the cap shall be maintained so that tire shreds do not become mobilized or exposed.
 - k. Tire shreds shall not be placed within or below unlined surface water channels, including drainage ditches. Tire shreds shall be placed no closer than 5 feet from surface waters, including drainage ditches.

- l. Tire shreds shall not be placed in contact with groundwater with a pH less than 6 or greater than 8.5.
 - m. Tire shreds shall not be placed in soils and/or groundwater in which pollutants or chemicals are present which may increase leaching of compounds from tire shreds or affect the stability of tire shreds.
 - n. The discharge of any waste other than tire shreds as specified in Condition 1 above is prohibited. A record shall be maintained of all areas where tire shreds are utilized for road construction. The record shall include a map specifying the lateral and vertical placement of the tire shreds, and an estimate of the total volume. The record should also include a detailed project description and schematic, and documentation that the conditions of the waiver above are met. The record shall be made available to Board staff within 30 days of request by the Executive Officer.
 - p. Should visual observations, field sampling and analysis, or additional water quality studies indicate that tire shreds are releasing chemicals at concentrations which significantly impact waters of the state, or have the potential to release chemicals at concentrations which significantly impact waters of the state, Caltrans shall notify the RWQCB within 30 days.
 - q. Any proposed change to conditions specified will require written approval from the Executive Officer.
10. **Authority:** This Order does not preempt or supersede the authority of federal or state agencies, or municipalities or other local agencies to prohibit, restrict, or control discharges of tire shreds subject to their jurisdiction.
 11. **Term of Waiver:** This waiver will expire in 5 years of adoption of this Order pursuant to Section 13269 of the California Water Code as modified by Senate Bill 390. Should the discharger seek reissuance of the waiver after the 5-year period, the discharger shall submit a formal request to the Executive Officer.
 12. **Notice and Meeting:** The Board has notified the Discharger and interested agencies and persons of its intent to waive waste discharger requirements, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

I, Lawrence P. Kolb, Acting Executive Officer, do hereby certify the foregoing is full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on June 21, 2000.


Lawrence P. Kolb
Acting Executive Officer